

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended): A semiconductor device fabrication method comprising the steps of:

polishing a surface of a film-to-be-polished formed over a semiconductor substrate with a polishing pad while a first polishing material of a polishing slurry containing abrasive grains and an additive of a surfactant is being supplied onto the polishing pad to thereby planarize the surface of the film-to-be-polished; and

after the surface of the film-to-be-polished has been planarized, further polishing the surface of the film-to-be-polished with the polishing pad while a second polishing material of the polishing slurry and water are being supplied onto the polishing pad, the polishing slurry contained in the second polishing material being the same kind as the polishing slurry of the first polishing material.

2. (Currently Amended): A semiconductor device fabrication method comprising the steps of:

polishing a surface of a film-to-be-polished formed over a semiconductor substrate with a polishing pad while a first polishing material of a polishing slurry containing abrasive grains and

an additive of a surfactant is being supplied onto the polishing pad to thereby planarize the surface of the film-to-be-polished; and

after the surface of the film-to-be-polished has been planarized, further polishing the surface of the film-to-be-polished with the polishing pad while a second polishing material of a mixture of the polishing slurry and water is being supplied onto the polishing pad, the polishing slurry contained in the second polishing material being the same kind as the polishing slurry of the first polishing material.

3. (Original): A semiconductor device fabrication method according to claim 1, wherein in the step of further polishing the surface of the film-to-be-polished, the water is supplied to a position outer of a position for the polishing slurry to be supplied to.

4. (Original): A semiconductor device fabrication method according to claim 1, wherein in the step of further polishing the surface of the film-to-be-polished, a supply amount of the water is 2 or more times as much as a supply amount of the polishing slurry.

5-11 (Cancelled).

12. (Original): A semiconductor device fabrication method according to claim 1, further comprising, before the step of planarizing the surface of the film-to-be-polished, the steps of:

forming over the semiconductor substrate an insulation film having polish characteristics different from those of the film-to-be-polished;

forming an opening in the insulation film;

etching the semiconductor substrate with the insulation film as a mask to form a trench in the semiconductor substrate; and

forming the film-to-be-polished in the trench and over the insulation film,

in the step of further polishing the surface of the film-to-be-polished, the surface of the film-to-be-polished is polished with the insulation film as a stopper.

13. (Original): A semiconductor device fabrication method according to claim 2, further comprising, before the step of planarizing the surface of the film-to-be-polished, the steps of:

forming over the semiconductor substrate an insulation film having polish characteristics different from those of the film-to-be-polished;

forming an opening in the insulation film;

etching the semiconductor substrate with the insulation film as a mask to form a trench in the semiconductor substrate; and

forming the film-to-be-polished in the trench and over the insulation film,

in the step of further polishing the surface of the film-to-be-polished, the surface of the film-to-be-polished is polished with the insulation film as a stopper.

Amendment under 37 C.F.R. §1.114
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14-27 (Cancelled).

28. (Original): A semiconductor device fabrication method according to claim 1, wherein the abrasive grains comprise cerium oxide or silicon oxide, the additive comprises poly(ammonium acrylate).

29. (Original): A semiconductor device fabrication method according to claim 2, wherein the abrasive grains comprise cerium oxide or silicon oxide, the additive comprises poly(ammonium acrylate).

30-33 (Cancelled).

34. (New): A semiconductor device fabrication method according to claim 1, wherein the ratio of a supply amount of the second polishing material of the polishing slurry to a supply amount of the water is 1:5.